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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/582,086

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Shinji Naruse

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EXAMINER

CHRISS, JENNIFER A

ART UNIT

PAPER NUMBER

1794

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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/582,086	<b>Applicant(s)</b> NARUSE, SHINJI	
	<b>Examiner</b> JENNIFER A. CHRISS	<b>Art Unit</b> 1794	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 18 March 2009.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 8-13 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 8-13 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Response to Amendment***

1. The Applicant's Amendments and Accompanying Remarks, filed March 28, 2009, have been entered and have been carefully considered. Claims 1 – 7 are cancelled and claims 8 – 13 are added and the only claims pending. In view of the cancellation of claims 4 – 7, the Examiner withdraws the 35 USC 112 rejection of paragraph 3 of the previous Office Action. In addition, in light of the cancellation of claims 1 - 7, the Examiner withdraws the 35 USC 112 rejection of paragraph 4 of the previous Office Action. In view of Applicant's cancellation of claims 1- 7 and the new limitation of "meta-aramid *staple fibers*", the Examiner withdraws the rejection as anticipated or obvious over Ohno et al. (CA 2,379,555). After an updated search, additional art has been found which renders the invention as currently claimed unpatentable for reasons herein below.

2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

### ***Claim Rejections - 35 USC § 102/103***

3. Claims 8 - 13 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Kirayoglu et al. (US 5,910,231) as evidenced by the definition of "fibril" from Complete Textile Glossary by Celanese Acetate.

Kirayoglu et al. is directed to papers containing aramid floc and fibrils and a

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process for improving the solvent resistance and dimensional stability of the papers (column 1, lines 5 – 10). Kirayoglu et al. teach a paper consisting essentially of 45 - 97% by weight poly(p-phenylene terephthalamide) short fibers, from 3 to 30 weight % of poly(m-phenylene isophthalamide) fibrils and from 0 to 35 weight % of quartz fiber. It should be noted that the paper “consists essentially of” aramid paper. The process of the present invention comprises heating the paper without the application of pressure at a temperature of from at least 280.degree. C. for at least 20 seconds but not more than 20 seconds at 330.degree. C. (column 1, lines 49 – 61). According to Complete Textile Glossary, fibrils are “short irregular fibrous products”. Therefore, the Examiner equates the poly(m-phenylene isophthalamide) fibrils to Applicant's "meta-aramid staple fibers". It should be noted that the heat treatment is performed at a temperature higher than 200 degrees C as required by Applicant. Kirayoglu et al. teach that the paper can be used as an inner layer to form a multi-layer printed wiring board where an electrical connection is provided between the various layers of the printed board (column 2, lines 20 – 45).

Kirayoglu et al. teach the claimed invention above but fails to teach that the increase ratio in internal resistance of the separator before and after its heat treatment at 300°C for 45 minutes is within 25%, where the internal resistance is calculated according to the following equation (1): (internal resistance) = {(electrical conductivity of electrolytic solution/(electrical conductivity of electrolytic solution-injected separator) } x (thickness of separator) .....equation (1). It is reasonable to presume that the above property is inherent to Kirayoglu et al. Support for said presumption is

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found in the use of like materials (i.e. an aramid paper comprising meta-aramid fibrils where the paper is heat treated at a temperature of at least 280 degrees C) which would result in the claimed property. The burden is upon the Applicant to prove otherwise. *In re Fitzgerald* 205 USPQ 594. In addition, the presently claimed properties would obviously have been present once the Kirayoglu et al. product is provided. Note *In re Best*, 195 USPQ at 433, footnote 4 (CCPA 1977). It should be noted that the claim does not positively require that the separator is heat treated at 300°C for 45 minutes but only that the increase ratio in internal resistance is within 25% according to the formula **when** the separator is heat treated at 300°C for 45 minutes, where the measurements are taken before and after heat treating. If the Applicant intends to require that the separator is heat treated at 300°C for 45 minutes, the claim should be amended to positively require that limitation.

### ***Double Patenting***

4. Claims 8 - 13 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1, 3, 4 and 11 of ***copending Application No. 11/659,426***. Although the conflicting claims are not identical, they are not patentably distinct from each other because they are both directed to a substrate formed from aramid fiber used as a separator in an electrical part. Copending Application No. 11/659,426 does not teach heat treating at temperatures not lower than 200 degrees C, however, it would have been obvious to one of ordinary skill in the art to heat treat the substrate within Applicant's desired

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temperature range as altering the heat treatment temperature is within the skill of one in the art depending on the desired properties of the substrate. Additionally, the Examiner submits that the property of claim 1 would be inherent to Application No. 11/659,426 based on like materials.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

5. Claims 8 - 13 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1, 3 and 6 of ***copending Application No. 11/885,156***. Although the conflicting claims are not identical, they are not patentably distinct from each other because they are both directed to a substrate formed from aramid fiber used as a separator in an electrical part. Copending Application No. 11/885,156 does not teach heat treating at temperatures not lower than 200 degrees C, however, it would have been obvious to one at ordinary skill in the art to heat treat the substrate within Applicant's desired temperature range as altering the heat treatment temperature is within the skill of one in the art depending on the desired properties of the substrate. Additionally, the Examiner submits that the property of claim 1 would be inherent to Application No. 11/885,156 based on like materials.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

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6. Claims 8 - 13 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1 and 3 of ***copending Application No. 11/578,570***. Although the conflicting claims are not identical, they are not patentably distinct from each other because they are both directed to a substrate formed from aramid fiber used as a separator in an electrical part. Copending Application No. 11/578,570 does not teach heat treating at temperatures not lower than 200 degrees C, however, it would have been obvious to one of ordinary skill in the art to heat treat the substrate within Applicant's desired temperature range as altering the heat treatment temperature is within the skill of one in the art depending on the desired properties of the substrate. Additionally, the Examiner submits that the property of claim 1 would be inherent to Application No. 11/578,570 based on like materials.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

7. Claims 8 – 13 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 12 and 15 of ***copending Application No. 10/519,003***. Although the conflicting claims are not identical, they are not patentably distinct from each other because they are both directed to a substrate formed from aramid fiber used as a separator in an electrical part. Copending Application No. 10/519,003 does not teach heat treating at temperatures not lower than 200 degrees C, however, it would have been obvious to

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one at ordinary skill in the art to heat treat the substrate within Applicant's desired temperature range as altering the heat treatment temperature is within the skill of one in the art depending on the desired properties of the substrate. Additionally, the Examiner submits that the property of claim 1 would be inherent to Application No. 10/519,003 based on like materials.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

### ***Response to Arguments***

8. Applicant's arguments with respect to claims 8 – 13 have been considered but are moot in view of the new ground(s) of rejection.

9. Applicant requests that the provisional double patenting rejections are held in abeyance pending an indication that the claims are in condition for allowance. The double patenting rejections are maintained and will be dealt with upon indication of allowance of the claims.

### ***Conclusion***

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).



A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JENNIFER A. CHRISS whose telephone number is (571)272-7783. The examiner can normally be reached on Monday - Friday, 8:30 a.m. - 6 p.m., first Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Larry Tarazano can be reached on 571-272-1515. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Jennifer A Chriss/  
Primary Examiner, Art Unit 1794

/J. A. C./  
Primary Examiner, Art Unit 1794